

EXERCISER HAVING IMPROVED FAN DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to an exerciser, and more
5 particularly to an exerciser having an improved fan device for
increasing an air scooping effect.

2. Description of the Prior Art

Various kinds of typical exercise apparatus have been
developed and comprise a resistive device coupled to a driving
10 device, in order to provide a resistive force against the driving
device.

For example, Great British Patent Application No. GB
2175813A, and U.S. Patent No. 2,512,911 to Benice disclose two of
the typical exercise machines comprising a coil spring type resistive
15 device to provide the resistive force against a pulling type driving
device. The typical exercise machines do not comprise a fan device
for generating cooling air.

U.S. Patent No. 5,916,069 to Wang et al. discloses another
typical exercise machine comprising a magnetic resistive device in
20 addition to a coil spring type resistive device, to provide the
resistive force against a pulling type driving device. The typical
exercise machine also fail to disclose a fan device for generating
cooling air.

U.S. Patent No. 6,488,611 to Ambrosina et al. discloses a
25 further typical exercise machine comprising a fluid resistance
device to provide an impeller actuated resistive force against a
driving device. However, the rotatable impeller is received within a

sealed housing, and thus also may not be used for generating cooling air to the users.

The present applicant has also developed a typical exercise machine comprising a magnetic resistive device for providing the resistive forces against a cycling exerciser, and disclosed in U.S. Patent No. 5,916,069 to Liou. The typical exercise machine also fail to disclose a fan device for generating cooling air.

The present invention has arisen to mitigate and/or obviate the afore-described disadvantages of the conventional exercisers.

SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide an exerciser including an improved fan device for increasing an air scooping effect and for generating a cooling air for users.

In accordance with one aspect of the invention, there is provided an exerciser comprising a base, a rotating wheel and a rotary member rotatably supported on the base, and coupled together, to allow the rotating wheel to be rotated by the rotary member, means for driving the rotary member to rotate the rotating wheel, and a fan device attached onto the rotating wheel and rotated in concert with the rotating wheel, so as to be driven by the driving means via the rotating wheel, and to generate cooling air.

The rotating wheel is a magnetic rotating wheel. The fan device includes a plate secured to the rotating wheel, and a plurality of fan blades extended from the plate. The fan blades are preferably extended radially and outwardly from the plate.

Each of the fan blades includes a side segment laterally extended out of the plate. Each of the side segments includes an

inner portion having an inclined surface formed therein. The plate includes an opening formed therein, the inclined surfaces of the side segments of the fan blades are spaced away from the opening of the plate.

5 The plate includes a peripheral flange extended laterally from one side thereof, to engage onto the rotating wheel and to firmly attach the fan device onto the rotating wheel. The peripheral flange of the plate includes an inner diameter equals to an outer diameter of the rotating wheel, to allow the plate to be firmly secured onto
10 the rotating wheel.

Further objectives and advantages of the present invention will become apparent from a careful reading of the detailed description provided hereinbelow, with appropriate reference to the accompanying drawings.

15 **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a perspective view of an exerciser in accordance with the present invention;

FIG. 2 is a partial exploded view of the exerciser;

FIG. 3 is another partial exploded view of the exerciser;

20 FIG. 4 is a partial top plan schematic view of the exerciser; and

FIG. 5 is a perspective view illustrating the other arrangement or application of the exerciser.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, and initially to FIGS. 1-4, an
25 exerciser in accordance with the present invention comprises a base
10 including one or more brackets 11, 12 provided thereon or
extended therefrom, for rotatably supporting a rotary member 20

and a rotating wheel 30 of a resistive device 3, for example.

The rotary member 20 and the rotating wheel 30 may be rotatably secured to the brackets 11, 12 with a pivot spindle 13 and a pivot shaft 14 respectively, and/or with unidirectional bearings 21, 31 respectively, to allow the rotary member 20 and the rotating wheel 30 to be rotated relative to the brackets 11, 12 in one direction or in an active direction only, but to prevent the rotary member 20 and the rotating wheel 30 from being rotated relative to the brackets 11, 12 in the other direction or in a reverse direction.

10 The rotary member 20 includes a sprocket or a pulley 22 formed or provided thereon, the rotating wheel 30 includes a corresponding sprocket or pulley 32 formed or provided thereon, and coupled to the corresponding sprocket or pulley 22 of the rotary member 20 with a coupling member 33, such as a chain or a belt 33, to allow the rotating wheel 30 to be rotated or driven by the rotary member 20.

20 The rotary member 20 further includes a pulley 23 formed or provided thereon to receive a cable 24 therein which may be wound around the pulley 23 as a spool. A handle 25 may be attached to a free end of the cable 24 to pull the cable 24, in order to rotate the rotary member 20, and so as to rotate or drive the rotating wheel 30 via the coupling member 33.

25 Alternatively, as shown in FIG. 5, a pair of cranks 27 and a pair of foot pedals 28 may also be attached to the rotary member 20, in order to rotate or drive the rotating wheel 30 via the coupling member 33. The other driving devices or mechanisms (not shown) may also be provided to rotate or drive the rotating wheel 30.

It is preferable that the rotating wheel 30 is a magnetic rotating wheel 30, or may include a magnetic retarding or resisting device (not shown) provided therein, to provide or to apply a magnetic retarding or resisting force against the rotating wheel 30 and the rotary member 20, and thus to provide a resistive force against the users.

One example of the magnetic retarding or resisting device has been disclosed in the applicant's U.S. Patent No. 5,916,069 to Liou, which may be taken as a reference for the present invention. The present invention is further to provide an improved fan device 40 for attaching to the rotating wheel 30 and for increasing an air scooping effect and for generating a cooling air for users.

The fan device 40 includes a plate 41 having a number of holes 42 formed therein to receive fasteners 43 which may secure the plate 41 onto one side portion 34 (FIGS. 2, 3) of the rotating wheel 30, and thus to be rotated in concert with the rotating wheel 30. The plate 41 includes an opening 44 formed therein for receiving the pivot shaft 14.

The fan device 40 preferably includes a peripheral flange 45 extended laterally from one side 46 of the plate 41, to engage onto the rotating wheel 30 (FIGS. 1, 4). The peripheral flange 45 of the fan device 40 preferably includes an inner diameter equals to an outer diameter of the rotating wheel 30, to allow the fan device 40 to be firmly or solidly attached or secured onto the rotating wheel 30.

The fan device 40 includes a number of fan blades 47 extended radially and outwardly from or beyond an outer peripheral portion

of the plate 41, for scooping air and for generating a cooling air for users. It is preferable that each of the fan blades 47 includes a side portion or segment 48 laterally extended out or beyond the other side 49 of the plate 41 (FIGS. 3, 4), to increase the air scooping
5 effect.

It is preferable that the side portions or segments 48 of the fan blades 47 includes an inclined surface 481 formed in the lower or inner portion thereof, and preferably spaced away from the opening 44 of the plate 41, to facilitate or to increase the air scooping effect
10 of the fan blades 47.

It is to be noted that the conventional exercisers fail to provide a fan device attached to a rotating wheel 30, to generate cooling air for the users. The fan devices of the conventional exercisers are confined within containers, to provide resistive force against the
15 users only, but may not be used to generate cooling air for the users.

Accordingly, the exerciser in accordance with the present invention includes an improved fan device for increasing an air scooping effect and for generating a cooling air for users.

Although this invention has been described with a certain
20 degree of particularity, it is to be understood that the present disclosure has been made by way of example only and that numerous changes in the detailed construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

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